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09/903,334	07/10/2001	Christopher L. Chappell	42390P11376	8442

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EXAMINER	
NGUYEN, HANH N	
ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 04/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/903,334	CHAPPELL ET AL.	
	Examiner	Art Unit	
	Hanh Nguyen	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Amendment filed on 8/10/04*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,9-14,17-24 and 27-32* is/are rejected.

7)☒ Claim(s) *7, 8, 15 , 16, 25 and 26* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6, 9-14, 17-24 and 27-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Quigley et al. (U.S. 6,650,624), hereinafter Quigley.

Regarding claims 1, 9 and 27 Quigley discloses a method comprising a modem 12 (client terminal device) and headend 1012 (see fig.2), wherein the modem 12 receives a downstream management message comprising bandwidth allocation (fig.7A discloses receiving via the receiver 296 the downstream management message, see col.24, lines 55-62 & col.1 lines 60-65) and a cyclic redundancy code (CRC) (Fig.69 discloses a packet comprising CRC 512 which check the information in the packet is complete, see col.66, lines 32-39). The client terminal device comprising a data buffer (the modem 12 as shown in fig.7A comprises FIFO);

storing bandwidth allocation information based upon selected ones of the bandwidth allocation elements in the data buffer (fig.7A discloses the granted bandwidth is introduced to downstream processor 342 which stores the grant bandwidth in the FIFO, see col.24, lines 55-67); and outputting the stored bandwidth allocation information from the data buffer in response to detecting a validation of the CRC (Fig.7A discloses the granted bandwidth is output from

FIFO via line 343 to downstream decryptor 344 (fig.7B) which includes a CRC, see col.24, line 55 to col.25, line 5 & col.25, lines 30-35.

Regarding claim 17, Quigley discloses a system comprising: a host processing system (DMA controller 522 in figure 7b); a data bus coupled to the host processing system (bus 343 in figure 7A); and a client iermination device coupled to the data bus (cable modem 12 of figure 2), the client termination device comprising a processing circuit (downstream processor 342 in figure 7A); a receiving circuit comprising logic to receive a downstream management message from transmission medium coupled to a client termination device (MAC header processing and MAP parser in figure 7A), the downstream management message comprising one or more bandwidth allocation elements and a cyclic redundancy code or CRC (the downstream message as structured per figure 44); a data buffer to store bandwidth allocation information based upon selected ones of the bandwidth allocation messages (storing bandwidth allocation information in FIFI of Fig.7A based on the grant bandwidth, see col.24, lines 55-65), and logic to output the stored bandwidth allocation elements from the data buffer to the processing circuit in response to detecting a validation of the CRC (Fig.7A discloses the granted bandwidth is output from FIFO via line 343 to downstream decryptor 344 (fig.7B) which includes a CRC, see col.24, line 55 to col.25, line 5 & col.25, lines 30-35.

Regarding claims 2, 10, 20 and 28, Quigley further discloses that the method/device further comprises: associating one or more bandwidth allocation elements with the client termination device based upon service identifier information (associating MAPS with cable modems 12 of figure 12 based on SIDs at step 609 of figure 75. A MAP is a table that stores bandwidth allocation information communicated between the CMTS and the cable modems;

column 24, lines 48-53) and for each bandwidth allocation element associated with the client termination device, storing bandwidth allocation information based upon the bandwidth allocation element in the data buffer (storing bandwidth allocation information based on the information element shown as 425 in figure 44).

Regarding claims 3, 11, 21, and 29 Quigley further discloses that the method/device comprises: sequentially storing bandwidth allocation information based upon one or more bandwidth allocation elements in a first-in-first-out data buffer at locations indicated by a write pointer (sequentially storing bandwidth allocation information in FIFOs as shown in figures 8A and 8B, and see column 55, lines 20-42, at locations indicated by offsets, see column 55, lines 43-44), advancing the write pointer after storing bandwidth allocation information for each bandwidth allocation element (it is inherent that the offsets are advanced to properly locations for fragmented data, and resetting the write pointer to an initial position upon detection of an invalid CRC in the downstream management message (it is inherent that the offsets are reset when the CRC/HCS validation step detects gn invalid CRC/HCS).

Regarding claims 4, 12, 22, and 30 Quigley furthqr discloses that the one or more upstream bandwidth allocation elements comprise at Ieast one data grant bandwidth allocation element and at Ieast one data grant pending bandwidth element (cable modem monitors MAPS for grant and grant pending for this SID, see column 69, lines 64-65).

Regarding claims 5, 13, 23, and 31 Quigley further discloses that the method/device comprises scheduling an upstream transmission for a bandwidth allocation element associated with a data grant bandwidth allocation element message upon detecting a validation of the CRC

(operation of the cable modem in transmitting fragmented data is scheduled as shown in figure 77, see column 69 lines 56-58, and it is inherent that this include CRC/HCS verification).

Regarding claims 6, 14, 24, and 32 Quigley further discloses that the method/device comprises: storing message header data in one or more first locations in a first-in first-out (FIFO) data buffer, the message header data being based upon a message header in the downstream management messpge (storing message header information in FIFO 173 filtered from downstream MAC frames as shown in figure 46 and disclosed in column 55, lines 20.42, where information stored is that which facililtes desired processing, see column 54, lines 25-35); and storing the bandwidth allocation information in subsequent locations in the FIFO data buffer (storing MAP information in FIFO 161 as shown in figure 46 and disclosed in column 55, lines 20-42).

Regarding claim 18 Quigley discloses the system further comprises logic to initiate a DMA transaction on the data bus in response to the processing circuit (The CPU interface 328 provides a control for the DMA engine 329 in figure 8a; see column 25, lines 45-57).

Regarding claim 19 Quigley discloses the system further comprises a cable modem termination system (fig. 1 element 1012; "headend", col 10 lines 40-67) coupled to the client termination device (element 12; "cable modem") by a transmission medium (element 1020; "optical fibers").

Allowable Subject Matter

Claims 7, 8, 15, 16, 25, and 26 are objected to as being dependent upon a rejected

base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 7, 15 and 25, the cited references taken individually or in combination fails to padicularly disclose where the combination of a method of storing the message header data in the FIFO data buffer at locations indicated bv a write pointer; advancing the write pointer to one or more of the subsequent locations: storing the bandwidth allocation information in the subsequent locations; and upon completion of storing the bandwidth information in the subsequent locations, storing data in the FIFO data buffer between the first locations and subsequent locations.

Response to Arguments

Applicant's arguments with respect to claims 1-6, 9-14, 17-24 and 27-32 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 571 272 3092. The examiner can normally be reached on Monday-Friday from 8AM to 5PM. The examiner can also be reached on alternate

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached on 571 272 3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HANH NGUYEN
PRIMARY EXAMINER